

## **Louisiana Wireless Information Network (LWIN) Ethernet Upgrade Overview**

### **Key Takeaways:**

- 90% of the LWIN System downtime is T1 related
- In 2023 LWIN will upgrade from T1 to Ethernet and add LTE backup to fix many of these issues.
- The SIEC will provide the hardware needed for this upgrade at no charge, but agencies are responsible for installation for their console sites.
- Ethernet circuits are more expensive than T1, so agencies should begin planning now for the additional expense for the circuits they pay for.

### **What is included in the LWIN Ethernet System upgrade?**

The Louisiana Wireless Information Network (LWIN) system is in need of the following **software and equipment upgrades:**

- Upgrade the current legacy T-1 infrastructure with modern MutliProtocol Labeled Switching (MPLS) over Ethernet services.
- Replacement of all network routers and switches, as they are out of warranty and maintenance is no longer supported by the vendor.
- FirstNet wireless failover backhaul

### **Why is the LWIN Ethernet upgrade needed?**

Last fall LWIN was upgraded to software release version – A2019.2 Once Motorola upgrades the LWIN system again in three years, new console / dispatch and tower sites will be required to have Ethernet circuits and equipment installed.

Antiquated copper T1 circuits account for over 90% of the LWIN System downtime. This project's goal is to drastically reduce this downtime. With the added benefit of FirstNet's wireless backhaul failure, there will be a significant decrease in LWIN System downtime.

### **What happens if the LWIN T1 circuits are not upgraded?**

Without a system upgrade, new console / dispatch and tower sites cannot be added to the LWIN system after the next system upgrade in approximately three years. Motorola current T1 routers and switches will be nearing their end of life and will not be supported for maintenance after the next upgrade in 2023. Additionally, ATT support for T1 circuits will end December 2023 and support for legacy equipment ends October 2023. ATT will migrate to installing Ethernet circuits for new circuit request in December of 2023.

### **How does the LWIN Ethernet upgrade affect agencies?**

LWIN user agencies (State and local) will receive new routers and switches at no cost to the agency. Cost associated with time and materials to install the new routers and switches will be the responsibility of the agency. The state will incur all cost with installing the new Ethernet circuits to the 63 console sites and 129 LWIN tower sites. If the agency is currently paying monthly for T1 circuits, then monthly cost of new Ethernet circuits will be \$902.63. If the agency is not incurring cost for usage of existing T1 circuits, then the agency will be responsible for paying for the monthly cost of the new Ethernet circuits.

FirstNet wireless backhaul is part of the Ethernet upgrade solution. This will provide seamless backup redundancy in the event of an Ethernet circuit failure. All agencies will be responsible for the FirstNet monthly fee of \$44.39.

**What is the current progress of the LWIN upgrade?**

A RFP was published for bid and ATT was the only bidder. Funding has been requested within the GOHSEP FY 21/22 budget request.

**LWIN Ethernet Upgrade Project Cost**

Location	Primary Ethernet Service			Firstnet	
	One-time Install	Monthly	Annual	Monthly	Annual
Master Sites	\$1,555,899.00	\$15,340.81	\$184,089.72		
Console Sites	\$96,511.88	\$10,831.56	\$129,978.72	\$532.68	
Tower Sites	\$555,108.53	\$152,256.26	\$1,827,075.12	\$5,726.31	\$68,715.72
Total	\$2,207,519.41	\$178,428.63	\$2,141,143.56	\$6,258.99	\$68,715.72
Motorola Hardware	\$4,805,000.00				
Total Install	\$7,012,519.41				